ABSTRACT

The interval Λ between each stripe of interference fringe generated in a conventional n-type contact layer is determined by a function ($f(\lambda) = \lambda(n^2-n_{eq}^2)^{-1/2}/2$) wherein λ, n, and n_{eq} represent luminous wavelength λ of lights radiated from a light emitting part 104, refractive index n of the n-type contact layer, and equivalent refractive index n_{eq} of the n-type contact layer in guided wave mode, respectively. The remaining thickness δ of the n-type contact layer 102 at the concave part D which is formed at the back surface of the crystal growth substrate may be about $\Lambda/2$. When at least one portion of the n-type contact layer which is formed right beneath the laser cavity remains with about δ in thickness, the n-type contact layer arranged even right beneath the laser cavity can maintain excellent contact to a negative electrode. As a result, effective light confinement enables to adequately suppress ripples in FFP owing to lights leaked into the n-type contact layer, to thereby provide a semiconductor laser which oscillates stable lights.